

10/501736

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
31 July 2003 (31.07.2003)

PCT

(10) International Publication Number
WO 03/063405 A1(51) International Patent Classification⁷: **H04L 1/00**(21) International Application Number: **PCT/GB03/00238**

(22) International Filing Date: 20 January 2003 (20.01.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0201139.3 18 January 2002 (18.01.2002) GB(71) Applicant (for all designated States except US): **IN-MARSAT LIMITED** [GB/GB]; 99 City Road, London EC1Y 1AX (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TRACHTMAN**, Eyal [GB/GB]; 99 City Road, London EC1Y 1AX (GB). **PLESSY-GOURDON**, Carole [FR/GB]; 99 City Road, London EC1X 1AX (GB). **FEBVRE**, Paul [GB/GB]; 229 Britannia Road, Ipswich IP4 5HF (GB). **FINES**, Panagiotis [GR/GB]; 64 Hartfield House, Baltic Street West, London EC1Y 0FU (GB).(74) Agent: **CROSS, James, P., A.**; R G C Jenkins & Co, 26 Caxton Street, London SW1H 0RJ (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

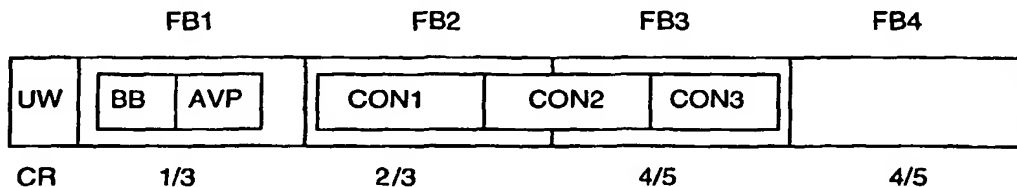
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WIRELESS TRANSMISSION WITH VARIABLE CODE RATE



(57) **Abstract:** A wireless communication system uses an adaptive air interface in which burst parameters are variable on a burst-by-burst basis, based on the reception quality of previous bursts and/or properties of the receiver or receivers of the burst. The parameter values are selected as sets which represent only some of the possible combinations of parameter values, to avoid redundancy in performance characteristics. Coding rates are selected to give a substantially constant increment in gain. Each burst may contain multiple FEC blocks with different coding rates. A unique word indicates the FEC coding rate of the first block and the first block identifies the coding rate of each of the subsequent blocks.

WO 03/063405 A1